REMARKS/ARGUMENTS

Claims 1-30 are pending in the application. Claims 1, 3-5, 8, and 15-30 have been

amended. No claims have been cancelled or added. The amendments to the claims as

indicated herein do not add any new matter to this application.

CLAIM REJECTIONS---35 U.S.C. § 101

Claims 15-28 stand rejected under 35 U.S.C. § 101 as allegedly being directed to non-

statutory subject matter. By this amendment, Claims 15-28 have been amended to recite

"computer-readable storage medium." The Patent Office has issued over 5,000 patents that

recite at least one claim directed towards a computer-readable storage medium. For example,

issued U.S. Patents 7,065,755, 7,065,740, and 7,065,715 each recite at least one claim

directed towards a computer-readable storage medium. Moreover, a computer-readable

storage medium is clearly an article of manufacture, which is one of the four statutory

categories of patentable subject matter under 35 U.S.C. § 101. The amendments to Claims

15-28 are made to clarify that a computer-readable storage medium stores one or more

sequences of instructions that may be executed by one or more processors of a machine. The

amendments to Claims 15-28 are not made to disclaim any embodiments where instructions

are transmitted or received over a transmission media prior to being stored on the computer-

readable storage medium.

REJECTIONS BASED ON THE CITED ART

Claims 1-14, 29 and 30 were rejected under 35 U.S.C. § 102(b) as being allegedly

anticipated by Sekiguchi (EP 0 999 490 A2) ("*Sekiguchi*"). This rejection is respectfully

traversed.

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Claims 15-28 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable

over *Sekiguchi* in view of U.S. Patent No. 6,597,777 to Ho ("Ho"). This rejection is

respectfully traversed.

CLAIM 1

Present Claim 1 recites:

A method for **monitoring a database**, comprising:
submitting a first set of one or more database queries, to a **database server that manages the database**, to retrieve, from the database server, user behavior data that indicates a first set of one or more actions performed, by one or more users, as a result of the one or more **users executing a first set of database statements against the database**;
processing and storing one or more sets of user behavior data as historical data, said one or more sets of user behavior data including said user behavior data that was retrieved from the database server in response to the first set of one or more database queries being executed against the database;
analyzing the historical data to determine behavior patterns;
submitting a second set of one or more database queries, to the database server, to retrieve, from the database server, a new set of data that indicates a second set of one or more actions performed, by the one or more users, as a result of the one or more **users executing a second set of database statements against the database**;
performing a comparison between the new set of data and the determined behavior patterns;
determining, based on the comparison, whether the new set of data satisfies a set of criteria;
if the new set of data satisfies the set of criteria, then determining that the new set of data represents anomalous activity; and
responding to the determination by performing a targeted operation. (emphasis added)

The Office Action cited paragraphs 21 and 22 of *Sekiguchi* as disclosing all the

features of Claim 1. Applicants respectfully disagree.

Sekiguchi lacks any discussion of detecting anomalous activity within a database. In

fact, *Sekiguchi* fails to even mention the word "database." Instead, *Sekiguchi* is directed

towards monitoring access to electronic equipment in general. *Sekiguchi* lacks any teaching

or suggestion of how the approach of *Sekiguchi* may be applied to a database. Consequently,

numerous features in each pending claim are not taught or suggested by *Sekiguchi*.

To illustrate, Claim 1 recites the feature of "submitting a first set of one or more

database queries, to a database server that manages the **database, to retrieve, from the**

database server, user behavior data that indicates a first set of one or more actions

performed, by one or more users, as a result of the one or more users executing a first set of

database statements against the database." The portion of *Sekiguchi* cited to show this

feature (paragraph 21) lacks any suggestion of **submitting a database query to a database**

server. Instead, the portion merely discusses an access monitor unit that acquires an access

log using an access log acquisition unit. This portion is not analogous to submitting a

database query to a database server that manages a database to retrieve, from the database

server, user behavior data as claimed, i.e., user behavior that indicates actions performed by

users as a result of the users executing database statements against the database.

As *Sekiguchi* fails to teach or suggest submitting one or more database queries to a

database server that manages a database, *Sekiguchi* cannot teach or suggest the feature of

"processing and storing one or more sets of user behavior data as historical data, said one or

more sets of user behavior data including said user behavior data that was retrieved from the

database server in response to the first set of one or more database queries being

executed against the database" as recited in Claim 1.

Claim 1 also recites the features of "submitting a **second set of one or more**

database queries, to the database server, to retrieve, from the database server, a new set of

data that indicates a second set of one or more actions performed, by the one or more users,

as a result of the one or more users **executing a second set of database statements against**

the database." The portion of *Sekiguchi* cited to show this feature (paragraph 21) is the same portion cited to show the feature of submitting a first set of one or more database queries, i.e., that portion merely states that an access monitor unit acquires an access log using an access log acquisition unit. The cited portion of *Sekiguchi* lacks any teaching or suggestion of a database server, let alone submitting a database query, to the database server, to retrieve, from the database server, a set of data that indicates actions performed by users as a result of the users executing database statements against the database.

Nothing in *Sekiguchi* suggests how the approach of *Sekiguchi* may be used or employed to detect anomalous activity within a database. Consequently, numerous features of Claim 1 are not taught or suggested by *Sekiguchi*. Therefore, it is respectfully submitted that Claim 1 is patentable over *Sekiguchi*.

CLAIMS 15, 29, AND 30

Claims 15, 29, and 30 recite limitations similar to those discussed above with reference to Claim 1, except that they are recited in computer-readable storage medium format, means apparatus format, and non-means apparatus format, respectively. Thus, Claims 15, 29, and 30 recite the features of Claim 1 that make Claim 1 patentable over *Sekiguchi*. Therefore, for at least the reasons discussed above with respect to Claim 1, each of Claims 15, 29, 30 also are patentable over *Sekiguchi*.

CLAIM 7

The Office Action cited paragraphs 30 and 35 of *Sekiguchi* for disclosing the features of Claim 7. Specifically, the Office Action cites the first sentence of paragraph 35:

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For this reason, the security management unit 112 manages information about a time zone using a method for determining the scope of the time zone where access is gained with a statistical process

for disclosing "determining a probability function for frequencies of database access", and the

second-to-last sentence of paragraph 35:

Such statistical information about an access is calculated for all accesses without dividing a section or by dividing a section of, for example, the past one month or one year, if necessary, and the time zone in which an access is permitted is set based on the calculation

for disclosing "determining a cumulative probability function from the probability function".

Nothing in these cited portions of *Sekiguchi* refers to a probability function or a cumulative

probability function. Even if *Sekiguchi* disclosed the feature of "determining a probability

function for frequencies of database access," *Sekiguchi* fails to teach or suggest that a

cumulative probability function is determined, must less a cumulative probability function

that is **determined from the probability function**.

REMAINING CLAIMS

The remaining dependent claims depend (directly or indirectly) on Claim 1 or Claim

15 discussed above. Each remaining dependent claim is therefore allowable for the reasons

given above for Claim 1. In addition, each remaining dependent claim introduces one or

more additional limitations. However, due to the fundamental differences already identified,

to expedite the positive resolution of this case a separate discussion of those limitations is not

included at this time, although the Applicants reserve the right to further point out the

differences between the cited art and the novel features recited in the dependent claims.

Application of Akio Sakamoto; Ser. No. 10/796,932
Filed: March 9, 2004
Reply to Office Action

CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending

claims are now in condition for allowance. Therefore, the issuance of a formal Notice of

Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is

believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

Hickman Palermo Truong & Becker LLP

Dated: November 21, 2006

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